

Waubee Lake Sediment Removal Plan

FINAL REPORT

Kosciusko County, Indiana

September, 2005



Prepared for:

Waubee Lake Association

PO Box 275
Milford, IN 46542

Prepared by:



708 Roosevelt Road
Walkerton, Indiana 46574
574-586-3400

WAUBEE LAKE SEDIMENT REMOVAL PLAN KOSCIUSKO COUNTY, INDIANA

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WAUBEE LAKE SEDIMENT REMOVAL PLAN KOSCIUSKO COUNTY, INDIANA

1.0 PROJECT DESCRIPTION AND PURPOSE

The Waubee Lake Sediment Removal Plan was completed with guidance from the Waubee Lake Association (Association). The plan is designed to improve the aesthetics and usability of Waubee Lake, which is located southeast of Milford in Kosciusko County, Indiana (Figure 1). The Association identified one area for sediment removal and one associated location for construction of a dredge material disposal basin (Figure 2).

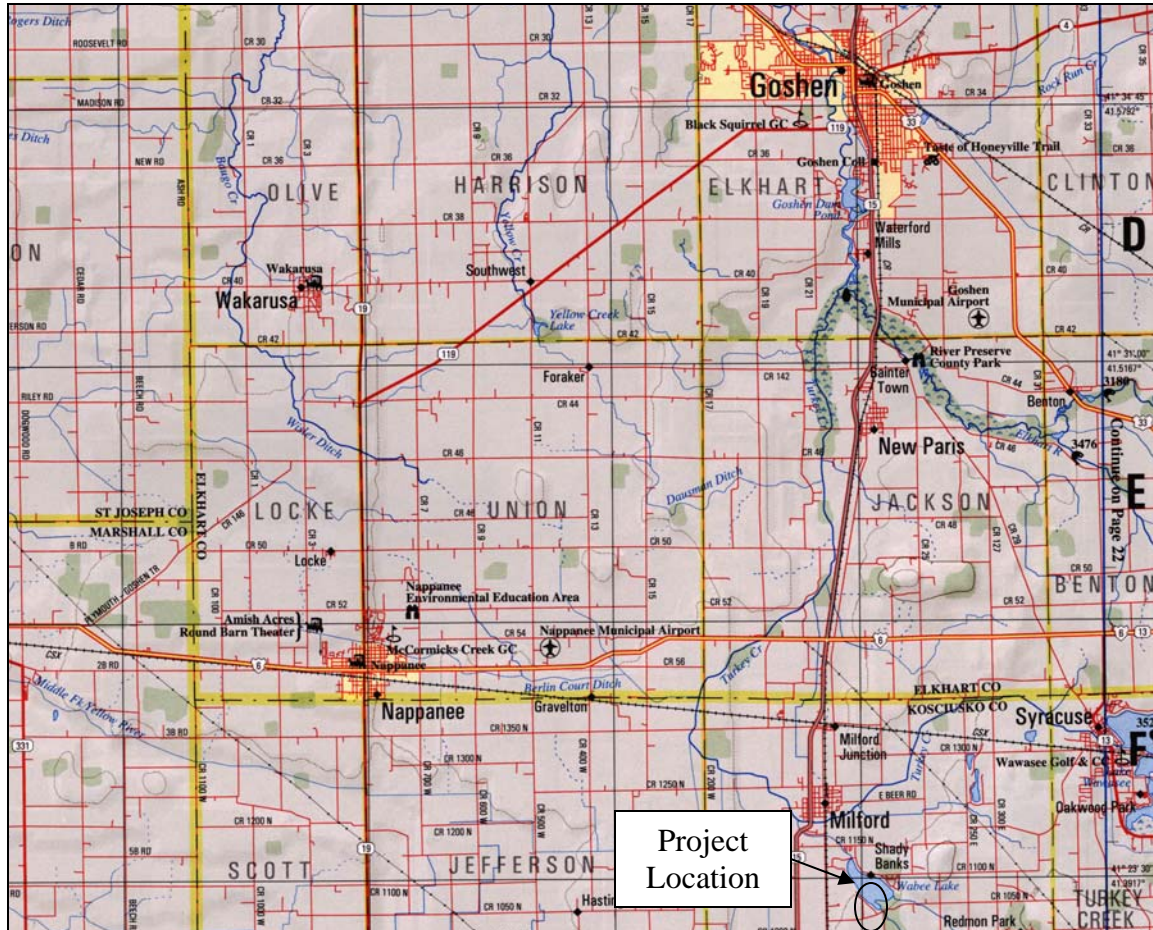


Figure 1. General project location map.

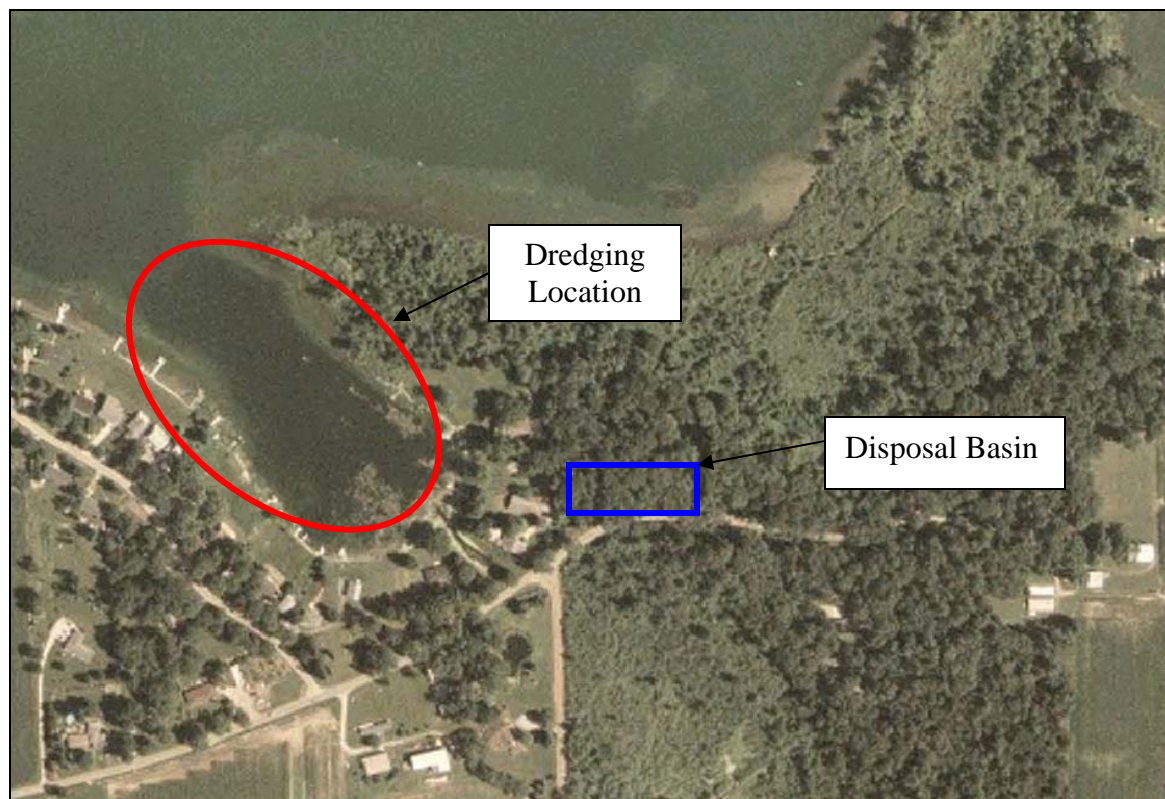


Figure 2. Dredging and dredge material disposal basin location.

2.0 DESIGN RATIONALE

The Waubee Lake Association planned to hydraulically dredge accumulated sediment from one location within Waubee Lake (Figure 2). Approximately 3.8 acres of accumulated sediment was removed from Waubee Lake near the outlet of Felkner Ditch during this project. An average of 4.4 feet of silt (sediment) will be removed. Sediment removal estimates were generated from sediment depth mapping and field estimates completed by the Waubee Lake Association on June 21, 2004. During field sampling, the Waubee Lake Association used a 2-inch PVC pipe to determine the depth of accumulated organic material or silt within the target area. Specifically, water depth, accumulated sediment depth, and natural bottom were measured. Sediment depth maps are included in Appendix A. Dredging volumes were calculated based on measured sediment depths and estimated dredging areas. A follow-up survey was conducted with the same methodology on September 2, 2005. The results of that survey are also in Appendix A.

During field sampling, sediment samples were inspected for sediment type and the probable origin of the material. All sediment to be removed from the lake is organic material, such as remnant plant or woody debris, or silt. Exact locations of silt and organic material origin could not be determined. It is estimated that silt and organic material originated from bare ground areas, such as agricultural fields within the Felkner Ditch subwatershed, or from decomposing in-lake and adjacent wetland plant material. Felkner Ditch originates at an animal waste pond outlet and flows through approximately two miles of wetland before draining into Waubee Lake (Harrold and Tracey, 2002).

3.0 DESIGN AND CONSTRUCTION SPECIFICS

3.1 Public Input and Landowner Agreements

The Association identified one sediment removal area (Felkner Ditch) as part of this sediment removal plan. Approximately 16 residents adjacent to the dredging area were contacted through the permitting and public notice process. Camp Alexander Mack, Inc. offered the use of an abandoned grave pit for dredge spoil disposal. A copy of the signed landowner agreement is included in Appendix B.

3.2 Sediment Characterization

One sediment sample was collected for laboratory analysis from within the proposed dredging area on November 14, 2004. The sediment sample was collected with a 2-inch diameter PVC pipe and placed in a plastic container and stored on ice. The sample was taken to Turner Tech, LLC in Warsaw, Indiana for analysis.

Analytical results and the Indiana Department of Environmental Management (IDEM) ceiling concentrations for the land application of solids are listed in Table 1. Copies of the lab results can be found in Appendix C. All of the laboratory results are below the IDEM ceiling concentrations for the application of solid materials to adjacent land. Total mercury, arsenic, cadmium, chromium, lead, selenium, and silver were all below laboratory detection limits.

Table 1. Analytical results from sediment samples collected November 14, 2004.

Parameter	Ceiling Concentration Limit	Felkner Ditch Outlet
Total Arsenic	75 mg/kg	0.250 mg/kg*
Total Barium	--	1.04 mg/kg
Total Cadmium	85 mg/kg	0.050 mg/kg*
Total Chromium	--	0.050 mg/kg*
Total Copper	4,300 mg/kg	0.0640 mg/kg
Total Lead	840 mg/kg	0.250 mg/kg*
Total Mercury	57 mg/kg	0.0200 mg/kg*
Total Selenium	100 mg/kg	0.250 mg/kg*
Total Silver	--	0.050 mg/kg*
Total Zinc	7,500 mg/kg	0.186 mg/kg
Total Solids	--	14.0%

3.3 Permitting

A Lake Preservation Permit was required from the Indiana Department of Natural Resources (IDNR) since work occurred "lakeward of the lake's legal or average shoreline". Clean Water Act Section 401 Water Quality Certification from the IDEM and a Section 404 permit from the U.S. Army Corps of Engineers (Corps) were not required because water from the dredged material was not returned from the sediment disposal basin to the lake. All water infiltrated the bottom of the basin; therefore, no return water pipes were necessary. A copy of the IDNR permit authorizing the sediment removal is included in Appendix D.

3.4 Hydraulic Dredging

Sediment was hydraulically dredged from the mouth of Felkner Ditch within Waubee Lake. Dredging was begun only after the sediment disposal basin had been constructed and dredge material outlet pipes to the basin were installed. The Association contracted with an engineering firm to administer the bidding process, monitor project progress, ensure timely completion of dredging, and map post-dredging contours. Pre and post sediment depth samples are of the dredged area are contained in Appendix A.

3.5 Sediment Disposal Basin

A sediment disposal basin was constructed within an old gravel pit prior to any dredging activity. The disposal basin was constructed by excavating the center of the pit to increase the containment area volume. The area within the gravel pit measured approximately 44,000 square feet. The existing walls had a minimum height of 8 feet with a maximum of 14 feet, but when modified, had a minimum of 15-foot of height. The pit was estimated to be capable of holding approximately 13,000 cubic yards of material without modification. When finished, the actual basin was capable of holding 24,000 yards of material. Appendix E contains a sketch of the design for the sediment dewatering basin.

Once the sediment has dried within the basin, the spoils will be reseeded with permanent grasses, planted with trees, and mulched with straw.

4.0 BIDDING REQUIREMENTS, FORMS, AND INFORMATION

The Association contracted with JFNew to administer the bidding process, monitor project progress, and ensure timely completion of dredging. An invitation was sent to three bidders for the excavation work and three additional bidders for the hydraulic dredging (Appendix F). The bid invitation included specifics regarding the dredging location and volume, sediment disposal basin location and construction details, project specifications, and bid return deadlines. Bids ranged from bids (accounting for in-kind service matches) ranged from \$4,000 to 12,000 for the basin work and from 60,000 to 83,565 for the hydraulic dredging.

5.0 CONSTRUCTION SCHEDULE

The grant allocation and contractor scheduling will determine the project timing. Theoretically, the project could be scheduled to begin implementation in late summer or early-fall of 2005 following grant allocation. Construction of the sediment disposal basin must be completed prior to piping any dredge spoils to the basin. Dredging will begin after the completion of the disposal basin.

Dredging was begun during the middle of July 2005 and completed by the end of August 2005. The first dredging company hired to complete the work did not have equipment specialized enough to remove sediments where there were rocks and sand. The first dredging company worked on the site for five weeks completing between 50-75 percent of the contracted work. A second dredging company was then hired to get the remainder of the sediment out of the lake. The second dredging company finished work in approximately 10 days.

The Waubee Lake Association and the spoils basin site owner have agreed to assume responsibility for level grading, seeding and tree planting of the basin, allowing the project to be closed in the fall of 2005.

6.0 COST ESTIMATES

It is estimated that sediment disposal basin modifications will cost \$16,000, while hydraulic dredging will cost approximately \$70,000. It is expected that administrative oversight will cost an additional 10% of the total project cost (\$8,600). In total, sediment removal in Waubee Lake as proposed will cost \$94,600.

7.0 ACTUAL DREDGE COST SUMMARY

	<u>Total Contract</u>	<u>In-Kind Credit</u>	<u>Total Fee</u>
Administration (JFNew)	\$14,000	\$4,600	\$9,400
Basin (Sawyer)	\$15,750	\$11,750	\$4,000
Dredging (Brainard)	\$50,000	0	\$50,000
Lawn repair	\$765	0	\$765
Basin leveling (Sawyer)	\$1,000	0	\$1,000
Dredging (Krevda)	<u>\$15,000</u>	<u>0</u>	<u>\$15,000</u>
	\$96,515	\$16,350	\$80,165

LARE pays 75% of total grant allocation (\$94,600)= \$70,950.50

Waubee Lake pays 25% of allocated LARE funding plus excess costs:

\$23,650.50 + \$1,915.00 = \$25,565.50 (\$16,350 in-kind match plus \$9,215.50 in cash)

8.0 LITERATURE CITED

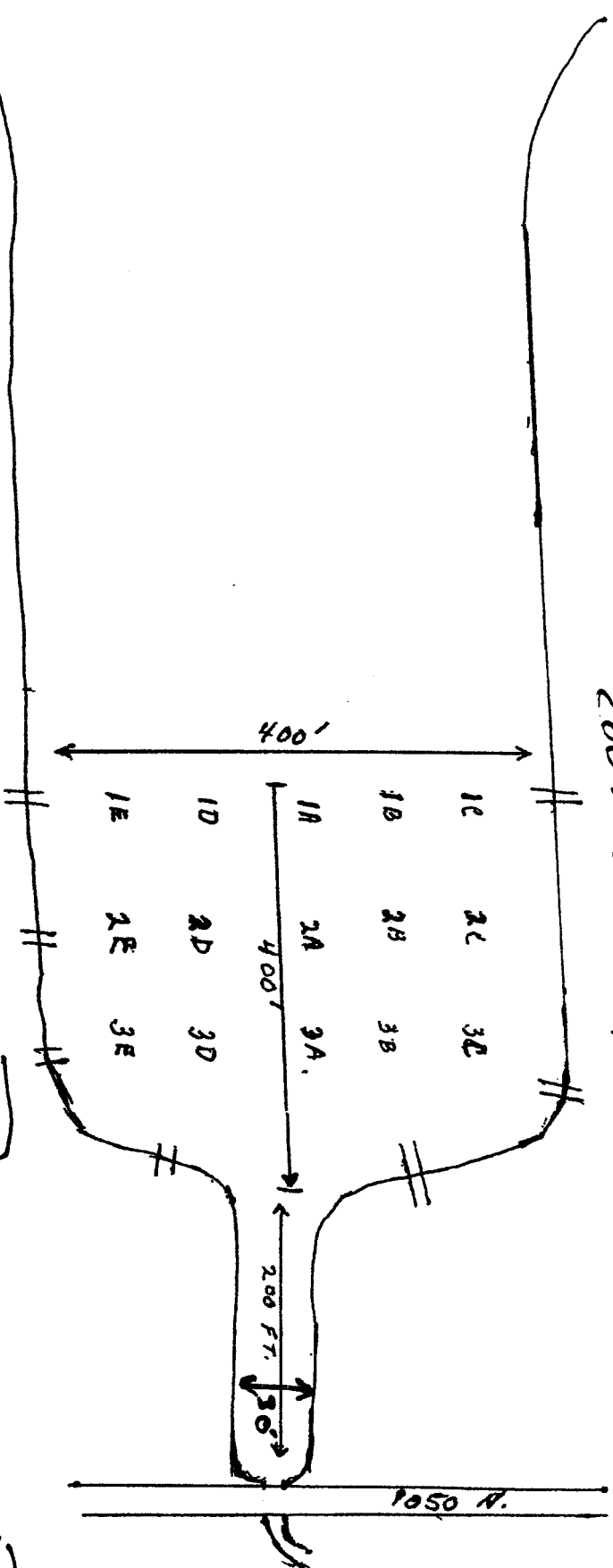
Harrold, J. and Kent Tracey. 2002. Waubee Lake Report. Indiana Department of Natural Resources, Division of Soil Conservation.

APPENDIX A:
SEDIMENT DEPTH MEASUREMENTS
BEFORE AND AFTER DREDGING

Plan View - Area of Dredging

$$400 \times 400 = 160,000 \text{ ft}^2 \approx 3.61 \text{ acres}$$

$$200 \times 30 = 6,000 \text{ ft}^2 \approx 0.14 \text{ acres}$$



WABBE
LAKE
6-21-04
P. J. Brown, District Engineer

	WATER DEPTH	BOTTOM DEPTH	SILT
1-A	9.0	13.0	4.0
1-B	8.5	14.0	5.5
1-C	4.0	8.0	4.0
1-D	5.0	7.5	4.5
1-E	3.5	7.0	3.5
2-A	4.0	10.0	6.0
2-B	3.0	6.0	3.0
2-C	2.5	6.0	3.5
2-D	4.0	10.0	6.0
2-E	3.0	6.0	3.0

	WATER DEPTH	BOTTOM DEPTH	SILT
3-A	2.5	8.0	5.5
3-B	1.5	8.0	5.5
3-C	1.0	7.0	5.0
3-D	2.5	8.0	5.5
3-E	2.3	6.3	4.0

PIERS

Material to be dredged

APPENDIX B:
LANDOWNER AGREEMENTS



Camp Alexander Mack, Inc.

August 30, 2004

Don Arnold
Waubee Lake Association

This letter is to express the intention of Camp Mack to provide an area to receive dredged spoils removed by hydraulic dredging from Lake Waubee in the area of the mouth of the Felkner drain. This area is the ravine that borders Mock Rd on south edge of our property. This area is marked on the enclosed map. We look forward to working with association in this work of lake improvement.

Sincerely,

Rex M. Miller
Executive Director

P.O. Box 158 • Milford, IN 46542 • www.campmack.org
Phone: 574-658-4831 Fax 574-658-4765

Camp Alexander Mack, a camp and retreat center, is a Christ-centered ministry of the Church of the Brethren in Indiana providing holy hospitality for God's people to meditate, commit, recreate, fellowship and serve.

APPENDIX C:
SEDIMENT SAMPLING RESULTS

Laboratory Report



Customer: 839

Sample: 96952

Waubee Lake Association, Inc Core #1 & #2

Desc Code: TCLP METALS

Certified Public Health Laboratory #: MC-43-1

Billing:

Date Sampled: 11/14/04 Time: 3:00 PM

USDA Laboratory Code #: 3659

Waubee Lake Association, Inc

Date Received: 11/15/04

560 S. Zimmer Road - P.O. Box 1096

Don Arnold

Date Reported: 11/19/04

Warsaw, Indiana 46581-1096

PO Box 275

P.O. Number:

Voice: 574-267-3305 / Fax: 574-269-6569

Milford, IN 46542

PWS_ID:

Billing:

Status: Completed

Waubee Lake Association, Inc

Don Arnold

PO Box 275

Milford, IN 46542

Test Description	Result	Units	MDL	Lab Method #	Batch #	Date and Time	Analyst
<i>Reference Method:</i>		QC-If Applicable					
TCLP Metals		mg/L		TCLP-MET	100427	11/18/04 6:12:00 AM	SL
Ref: ICP METALS, TCLP LEACHED				Comments: See Attached Report			
TCLP Extraction				1311	100428	11/16/04 12:00:00 PM	SL
Ref: 1311 Synthetic Precipitation Leaching Procedure				Comments: See Attached Report			
Ammonia Nitrogen	2.7	mg/L	0.1	4500NH3F	100429	11/19/04 12:30:00 PM	WL
Ref: 4500 NH3 F Ammonia Selective Electrode				Comments:			

Result of "ND" indicates None Detected. For bacteriological results "ND" indicates negative. Zeros to the right of the decimal point and/or to the right of a decimal point are not significant. ie: 10.00 = 10; 1.00 = 1; 1.10 = 1.1 MDL - Minimum Detection Level concentration reportable >0 with 99% confidence in an aqueous matrix.

Testing is conducted in accordance with Turner Tech, LLC "Quality Control / Quality Assurance Manual" and the following regulations as applicable: 40 CFR Part 136, 40 CFR Part 261, or PL 91-597.

This document shall not be reproduced, except in full, without the written approval of Turner Tech, LLC. "Terms and Conditions" is part of this document.

Approved By:

David M. Turner

5738 Industrial Road
Fort Wayne Indiana 46825
260-471-7000

Fax: 260-471-7777

CLIENT: TURNER TECH LLC
Lab Order: F04110206
Project: 96952 & 96955

Date 11/15/04
Date 19-Nov-04

Lab ID: F04110206-01 Collection 11/14/04 3:00:00 PM Sample 96952
Matrix SLUDGE

<u>Analyses</u>	<u>Result</u>	<u>Detection</u> <u>Limit</u>	<u>Qual</u>	<u>Units</u>	<u>Date</u> <u>Analyze</u>	<u>Analys</u>
MERCURY, TCLP LEACHED	SW7470A					JAG
Mercury	ND	0.0200		ppm	11/19/04	
SOLIDS, TOTAL	M2540 G					TSB
Percent Total Solids	14.0	1.00		wt%	11/17/04	
ICP METALS, TCLP LEACHED	SW1311/6010B					JAG
Copper	0.0640	0.0250		ppm	11/18/04	
Zinc	0.186	0.0500		ppm	11/18/04	
ICP METALS, TCLP LEACHED	SW1311/6010B					JAG
Arsenic	ND	0.250		ppm	11/18/04 6:12:31	
Barium	1.04	0.625		ppm	11/18/04 6:12:31	
Cadmium	ND	0.050		ppm	11/18/04 6:12:31	
Chromium	ND	0.050		ppm	11/18/04 6:12:31	
Lead	ND	0.250		ppm	11/18/04 6:12:31	
Selenium	ND	0.250		ppm	11/18/04 6:12:31	
Silver	ND	0.050		ppm	11/18/04 4:29:07	
TCLP SAMPLE PREP (METALS)	SW1311					JAG
Date Extracted	11/16/04	0		Date	11/16/04	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds MCL or Permit Limitation

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
MI+ - Matrix Interference
H - Exceeds Holding Time

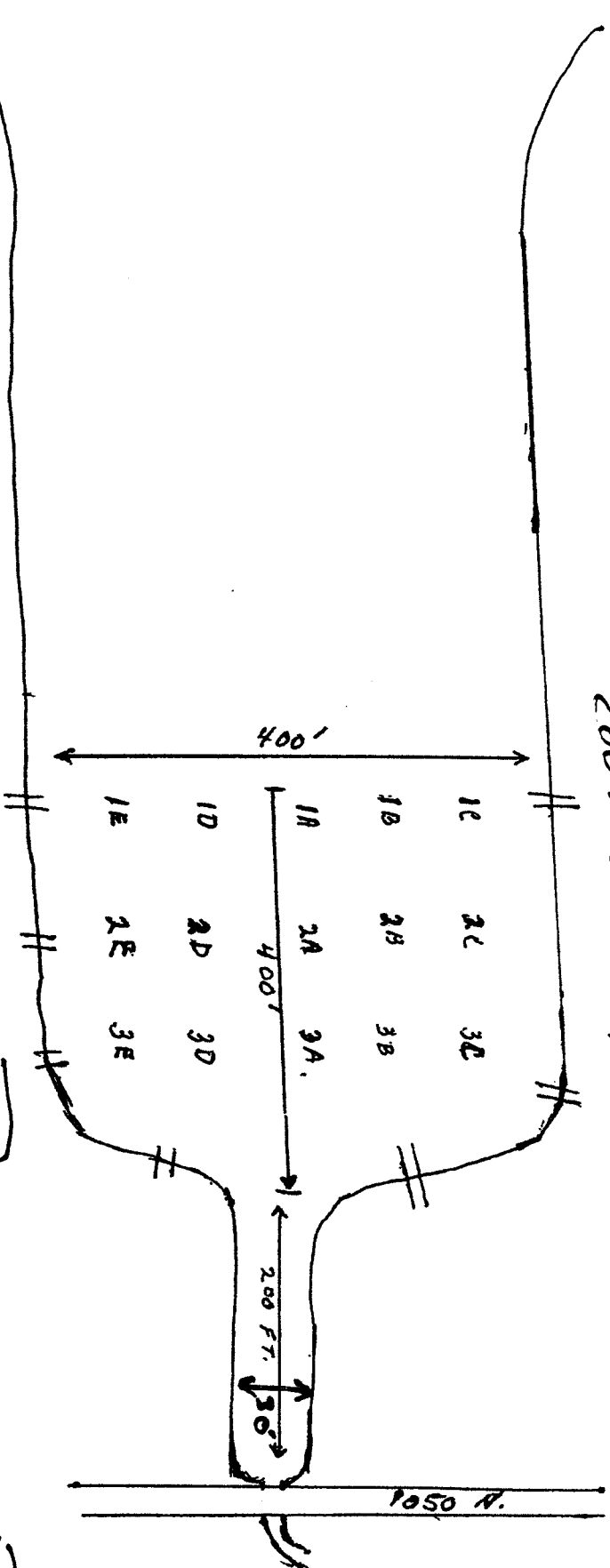
Page 1 of 2

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Plan View - Area of Dredging

$$400 \times 400 = 160,000 \text{ ft}^2 \approx 3.61 \text{ acres}$$

$$200 \times 30 = 6,000 \text{ ft}^2 \approx 0.14 \text{ acres}$$



WABBE
LAKE
6-21-04
P. J. Brown, District Engineer

	WATER DEPTH	BOTTOM DEPTH	SILT
1-A	9.0	13.0	4.0
1-B	8.5	14.0	5.5
1-C	4.0	8.0	4.0
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1-E	3.5	7.0	3.5
2-A	4.0	10.0	6.0
2-B	3.0	6.0	3.0
2-C	2.5	6.0	3.5
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	WATER DEPTH	BOTTOM DEPTH	SILT
3-A	2.5	8.0	5.5
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3-C	1.0	7.0	5.0
3-D	2.5	8.0	5.5
3-E	2.3	6.3	4.0

PIERS

Material to be dredged

APPENDIX D:

PERMITS

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

MAILED JAN 25 2005

**CERTIFICATE OF APPROVAL
PUBLIC FRESHWATER LAKE**

APPLICATION # : PL-20022

LAKE : Wabee Lake

APPLICANT : Wabee Lake Association
Don Arnold
PO Box 275
Milford, IN 46542-0275


AGENT : Dredging Technologies, Inc
Jeff Krevda
4896 East 200 South
Marion, IN 46953-9135

AUTHORITY : IC 14-26-2 with 312 IAC 11

DESCRIPTION : An approximate 400' x 400' area of the lake will be restored to its original condition. A maximum of 6' of accumulated muck and debris will be removed by dredging to a maximum depth of 10' below the lake's legal level at the center of the channel and sloping uniformly to a depth of 0' at the shoreline. Additionally, 200' of an existing channel will be dredged. A maximum of 7' of accumulated muck and debris will be removed from the channel bed by dredging to a maximum depth of 8' below the lake's legal level at the center of the channel and sloping uniformly to a depth of 0' at the shoreline. The dredging will be performed by hydraulic suction. The excavated material will be pumped to an upland detention area where it will be dewatered before being transported to an offsite disposal. Details of the project are contained in information and plans received at the Division of Water on November 29, 2004 and January 14, 2005.

LOCATION : DOWNSTREAM: Immediately downstream (north) of the Mock Road channel crossing near Milford, Van Buren Township, Kosciusko County
NE¼, NE¼, SE¼, Section 21, T 34N, R 6E, Milford Quadrangle
UTM Coordinates: Downstream 4582133 North, 597990 East
UPSTREAM: Kosciusko County

UTM Coordinates: Upstream 4581969 North, 598151 East

APPROVED BY : 
James J. Hebenstreit, P.E., Assistant Director
Division of Water

APPROVED ON : January 24, 2005

Attachments: Notice Of Right To Administrative Review
General Conditions
Special Conditions
Service List

**STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES**

NOTICE OF RIGHT TO ADMINISTRATIVE REVIEW

APPLICATION #: PL- 20022

This signed document constitutes the issuance of a permit by the Department of Natural Resources, subject to the conditions and limitations stated on the pages entitled "General Conditions" and "Special Conditions".

The permit or any of the conditions or limitations which it contains may be appealed by applying for administrative review. Such review is governed by the Administrative Orders and Procedures Act, IC 4-21.5, and the Department's rules pertaining to adjudicative proceedings, 312 IAC 3-1.

In order to obtain a review, a written petition must be filed with the Division of Hearings within 18 days of the mailing date of this notice. The petition should be addressed to:

Mr. Stephen L. Lucas, Director
Division of Hearings
Room W272
402 West Washington Street
Indianapolis, Indiana 46204

The petition must contain specific reasons for the appeal and indicate the portion or portions of the permit to which the appeal pertains.

If an appeal is filed, the final agency determination will be made by the Natural Resources Commission following a legal proceeding conducted before an Administrative Law Judge. The Department of Natural Resources will be represented by legal counsel.

**STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES**

GENERAL CONDITIONS

APPLICATION #: PL- 20022

- (1) If any archaeological artifacts or human remains are uncovered during construction, federal law and regulations (16 USC 470, et seq.; 36 CFR 800.11, et al) and State Law (IC 14-21-1) require that work must stop and that the discovery must be reported to the Division of Historic Preservation and Archaeology within 2 business days.

Division of Historic Preservation and Archaeology
Room W274
402 West Washington Street
Indianapolis, IN 46204

Telephone: (317) 232-1646, FAX: (317) 232-8036

- (2) This permit must be posted and maintained at the project site until the project is completed.
- (3) This permit does not relieve the permittee of the responsibility for obtaining additional permits, approvals, easements, etc. as required by other federal, state, or local regulatory agencies. These agencies include, but are not limited to:

Agency	Telephone Number
*US Army Corps of Engineers, Detroit District	(313) 226-2218
Kosciusko County Drainage Board	(574) 372-2367
Indiana Department of Environmental Management	(317) 233-8488 or (800) 451-6027
Local city or county planning or zoning commission	

- (4) This permit must not be construed as a waiver of any local ordinance or other state or federal law.
- (5) This permit does not relieve the permittee of any liability for the effects which the project may have upon the safety of the life or property of others.
- (6) This permit may be revoked by the Department of Natural Resources for violation of any condition, limitation or applicable statute or rule.
- (7) This permit shall not be assignable or transferable without the prior written approval of the Department of Natural Resources. To initiate a transfer contact:

Mr. Michael W. Neyer, PE, Director
Division of Water
Room W264
402 West Washington Street
Indianapolis, IN 46204

Telephone: (317) 232-4160, Toll Free: (877) 928-3755
FAX: (317) 233-4579

- (8) The Department of Natural Resources shall have the right to enter upon the site of the permitted activity for the purpose of inspecting the authorized work.
- (9) The receipt and acceptance of this permit by the applicant or authorized agent shall be considered as acceptance of the conditions and limitations stated on the pages entitled "General Conditions" and "Special Conditions".

**STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES**

SPECIAL CONDITIONS

APPLICATION #: PL- 20022

PERMIT VALIDITY : This permit is valid for 24 months from the "Approved On" date shown on the first page. If work has not been completed by January 24, 2007 the permit will become void and a new permit will be required in order to continue work on the project.

This permit becomes effective 18 days after the "MAILED" date shown on the first page. If both a petition for review and a petition for a stay of effectiveness are filed before this permit becomes effective, any part of the permit that is within the scope of the petition for stay is stayed for an additional 15 days.

CONFORMANCE : Other than those measures necessary to satisfy the "General Conditions" and "Special Conditions", the project must conform to the information received by the Department of Natural Resources on: November 29, 2004 and January 14, 2005. Any deviation from the information must receive the prior written approval of the Department.

Number	Special Condition
(1)	dredging may only take place during the last half of the calendar year
(2)	within 60 days after dredging, please submit a hydrographic map and adequate profile of the lakebed and channel bottom water depth within the project site with a minimum of 30 specific global positioning system (GPS) reference points to Jed Pearson, Division of Fish and Wildlife, at 5570 North Fish Hatchery Road, Columbia City, IN 46725 to monitor future changes and sediment accumulation in the area
(3)	if sediment is removed hydraulically and transported to an upland dewatering basin, adequate slurry detention time and sediment removal measures must be utilized to ensure that the water returned to the lake or channel is of similar quality to the existing lake water and is not carrying excessive sediment back into the lake

**STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES**

SERVICE LIST

APPLICATION #: PL- 20022

Wabee Lake Association
Don Arnold
PO Box 275
Milford, IN 46542-0275

Dredging Technologies, Inc
Jeff Krevda
4896 East 200 South
Marion, IN 46953-9135

*US Army Corps of Engineers, Detroit District
Gary Mannesto
Regulatory Functions Branch
PO Box 1027
Detroit, MI 48231-1027

JF New & Associates, Inc
John Richardson
708 Roosevelt Road, Suite A
Walkerton, IN 46574-1220

Kosciusko County Drainage Board
County Surveyor
Courthouse, Room 103
100 West Center Street
Warsaw, IN 46580-2872

*Indiana Department of Natural Resources
North Region Headquarters Dist 1
Division of Law Enforcement
1124 North Mexico Road
Peru, IN 46970

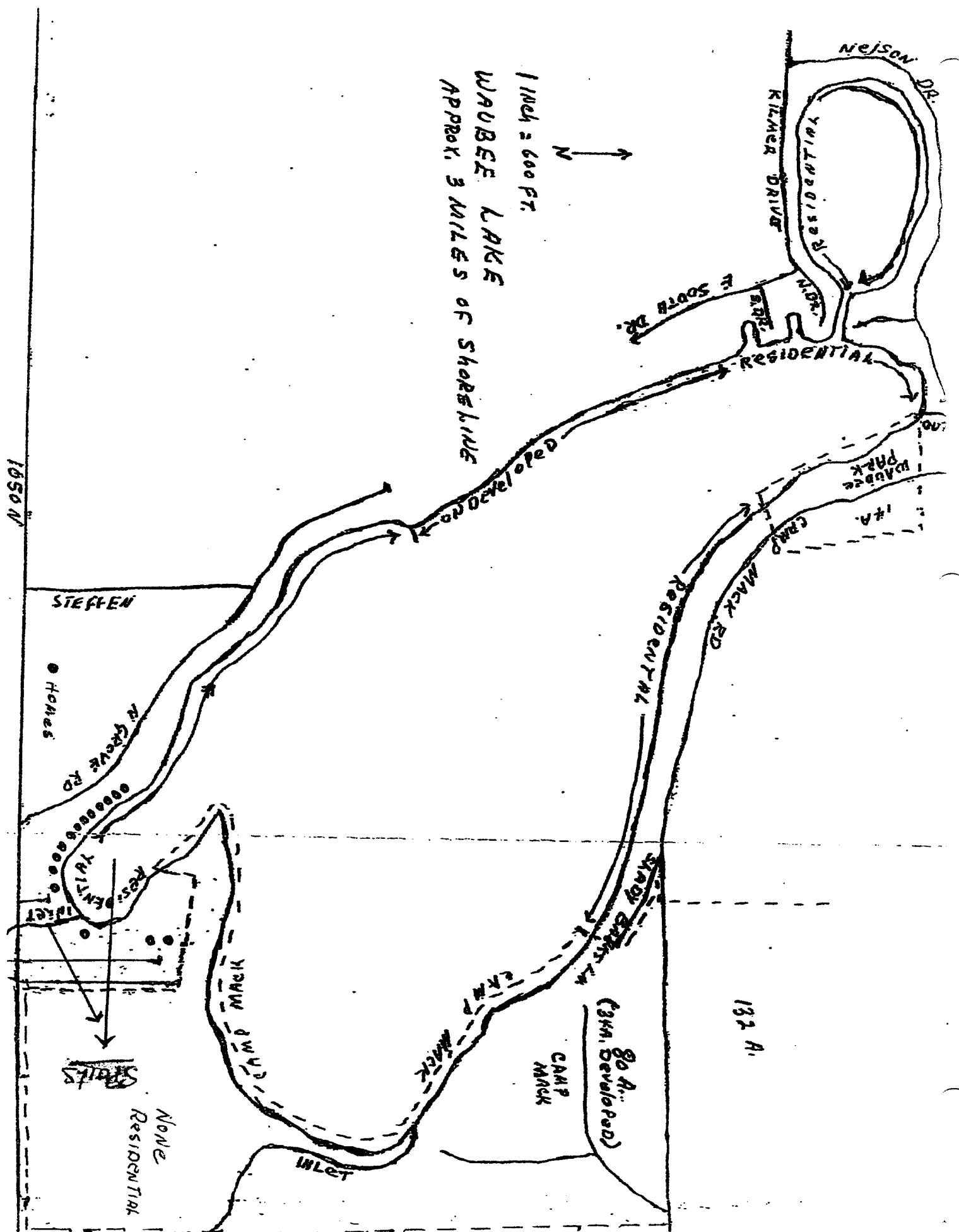
Kosciusko County Area Plan Commission
Court House, 1st Floor, Room 26
100 West Center Street
Warsaw, IN 46580-2872

Kosciusko County Soil and Water Conservation
District
217 Bell Drive
Warsaw, IN 46580-9362

Staff Assignment:

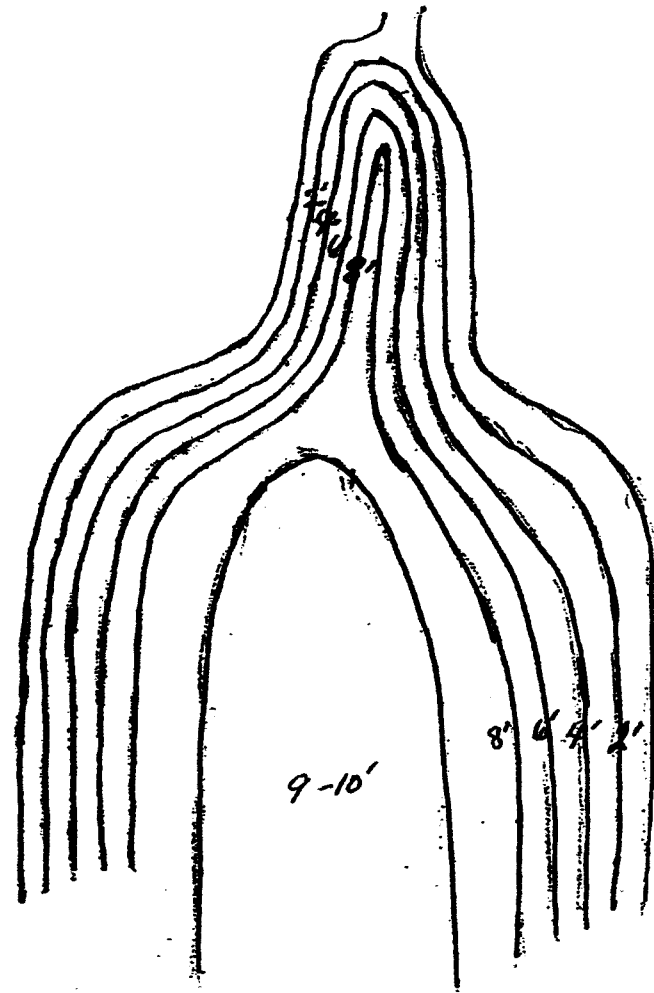
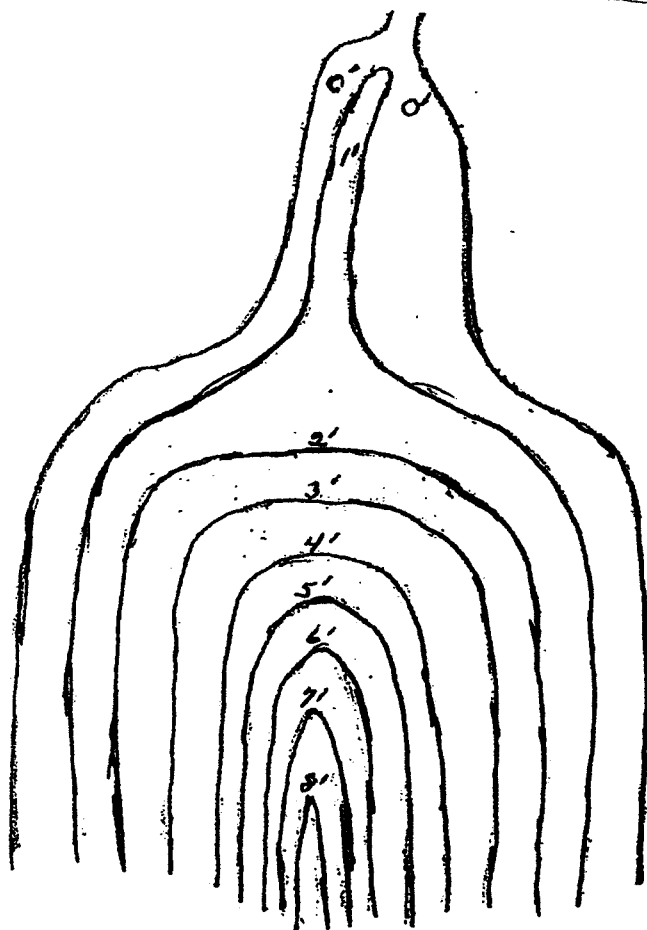
Administrative	: Stuart L. Peckham
Technical	: Stuart L. Peckham
Environmental	: Christie L. Kiefer

APPENDIX E:
DESIGN DETAILS



EXISTING WATER DEPTH

PROPOSED WATER DEPTH



APPENDIX F:

Bid Documents, Bid Summary and Contracts

Summary of Contractor Bids for the Felkner Drain outlet Dredging Project

<u>Firm Name</u>		<u>Dredging</u>	<u>Basin</u>	<u>In-</u>
		<u>Kind Match*</u>		
Kent Sawyer	0	15,750	6,000 for trees and seed 5,750 for brush/treetops	
Colby Stanger	0	11,754	500 for trees and seed	
EFM Excavating	0	15,795	1,000 for trees and seed 4,000 for brush/treetops	
O'Bryan	66,000	12,000	3,000 for trees and seed	
Brainard	60,000	0	0	
Dredging Tech.	83,568	0	lodging, no amount specified	

* The In-Kind match offered by contractors was broken into two distinct activities. Trees and seed, refers to the seeding and tree planting of the spoils basin after the completion of the dredging. The tree planting will not be able to occur until after October 2005 when the basin has dried enough for access and trees are in winter dormancy again. If you use this match, lake association members will have to buy the seed and trees with association funds and plant them on their own time. The retail cost of trees and seed would be about \$800.00. The "brush/tree tops" refers to the removal of the treetops and brush after the logging is completed within the proposed spoil basin. To use this in-kind match, lake association members will have to cut up and dispose of all downed trees and brush in the basin as soon as the logger has finished his work and before July 1, 2005.

Bid Summary

The lowest priced hydraulic dredging bid is Brainard Backhoe and Dredging at \$60,000. Mr. Brainard has offered to truck excess spoils that will not fit in the basin, to any site within 5 miles at no additional cost. We can assure this by putting it into his contract.

The basin bids were a little more complicated. Colby Stanger offered the lowest bid at \$11,574 if the in-kind services are not considered. If only the tree and seed in-kind services are desired than O'Bryan has the lowest bid, however, they would want the total package (dredging and basin work) at \$75,000. The next lowest bid considering the tree and seed in-kind match is Sawyer Excavating at \$9,750.00. If the association is able to remove the treetops and brush then the low bidder is Sawyer Excavating at \$4,000.

Sawyer Excavating and Brainard backhoe and dredging were hired for the project. When Brainard could not complete the job due to inadequate equipment, Dredging Technologies was contracted to complete the job for \$15,000 and Brainard was asked to settle for \$50,000.

Bid Documents and Specifications: Section 1

INVITING BIDS FOR WAUBEE LAKE DREDGING PROJECT MILFORD, INDIANA

The Waubee Lake Association, c/o JFNew, will receive bid proposals until **6:00 pm on May 16, 2005** at the location stated below for the construction of the: **“ The sediment spoils basin ” and the “dredging work”**.

Bids shall be submitted on the enclosed documents. After a satisfactory bid is received the Waubee Lake Association shall award a contract to the lowest responsible and responsive bidders.

To determine whether a bidder is responsive the Waubee Lake Association may consider the following factors:

- (1) Whether the bidder has submitted a bid or quote that conforms in all material respects to the specifications
- (2) Whether the bidder has submitted a bid that complies specifically with the invitation to bid and the instructions to the bidder.
- (3) The ability and capacity of the bidder to perform the work.
- (4) The integrity, character, and reputation of the bidder.
- (5) The competency and experience of the bidder.

All questions related to the project scope and all bids shall be submitted to:

John Richardson
JFNew
708 Roosevelt Road
Walkerton, IN 46574
574-586-3400

Bid Documents and Specifications: Section 2

INSTRUCTIONS TO BIDDERS FOR WAUBEE LAKE DREDGING PROJECT MILFORD, INDIANA

The WAUBEE LAKE DREDGING PROJECT: The work on this contract is located on the south side of Waubee Lake at the outlet of Felkner Drain, north of 1050 North, Milford, Indiana.

PLANS and SPECIFICATIONS: The plans and specifications to be used in the construction of this project are contained within the attached "Waubee Lake Sediment Removal Plan". All material estimates within the report are not warranted by JFNew or the Waubee Lake Association. Contractors are responsible for visiting the site and determining material estimates for use in developing a firm bid price.

PROPOSALS: Bid proposals shall be submitted on the forms provided herein.

INTERPRETATION OF THE PLANS AND SPECIFICATIONS: If any person contemplating submitting a bid for this work is in doubt as to the true meaning of any part of the plans, specifications or other proposed contract documents, he or she may submit a written request to the JFNew for interpretation thereof. JFNew or the Waubee Lake Association will not be responsible for any other explanations or interpretations of the contract documents.

ADDENDA: Any addenda issued during the time of bidding, or forming a part of the contract documents given to the bidder for preparation of his or her proposal, shall be covered in the proposal and shall be made a part of the proposal. Receipt of each addendum shall be acknowledged and attached to the proposal.

AWARD OF THE CONTRACT: After a satisfactory bid is received the Waubee Lake Association shall notify the bidders of a selection on or before May 23, 2005 and award a contract to the lowest responsible and responsive bidders on or before June 27, 2005

Bid Documents and Specifications: Section 3

BIDDERS LUMP SUM PROPOSAL

**FOR WAUBEE LAKE DREDGING PROJECT
MILFORD, INDIANA**

Instructions to Bidders:

All Bidders shall utilize this form. Except as otherwise specifically provided, all parts shall be fully and accurately filled in and completed.

Project: **WAUBEE LAKE DREDGING PROJECT - MILFORD, INDIANA**

Date: _____

To: **John Richardson, JFNew, 708 Roosevelt Road, Walkerton, IN 46574**

BIDDER INFORMATION

(Print or Type)

1.1 Bidder Name: _____

1.2 Bidders Address: _____

City: _____ State: _____ Zip: _____

Phone: (_____) _____ Fax: _____

1.3 Bidder is a/an *[mark one]*:

_____ Individual _____ Partnership _____ Indiana Corporation
_____ Foreign (Out of State) Corporation
_____ Joint Venture _____ Other: _____

1.4 Bidders Federal ID No. _____

**FOR WAUBEE LAKE DREDGING PROJECT
MILFORD, INDIANA**

- 2.1 The undersigned Bidder proposes to furnish all necessary labor, equipment, tools, apparatus, materials, equipment, service and other necessary supplies, and to perform and fulfill all obligations incident thereto in strict accordance with and within the time(s) provided by the terms and conditions of the Contract Documents for the work described on page 3 of this bid, including any and all addenda thereto, for the total sum of: _____

_____ Dollars (\$ _____).

Signed the _____ day of _____, 200__

Bidder/Contractor - Signature

Name - Printed

PART 3
BID WORKSHEET
FOR WAUBEE LAKE DREDGING PROJECT
MILFORD, INDIANA

Item Number	Description	Quantity	Unit Price*	Amount
1	This work will consist of preparing the identified basin for receipt of the hydraulic dredge spoils, and then seeding and planting the dredge spoils as per the plans and specifications.	1		
2	This work will consist of all labor, machinery and expenses associated with hydraulic dredging of 3.81 acres of Waubee Lake to a minimum depth of (8) eight feet.	1		

*Bid only on those items upon which you are able to perform.

PART 4
CONTRACT DOCUMENTS AND ADDENDA

4.1 The bidder agrees to be bound by the terms and provisions of all Contract Documents and incorporates such Contract Documents herein by reference.

4.2 The Bidder acknowledges receipt of the following addenda:

Addendum Number

Date

CONTRACT
FOR WAUBEE LAKE DREDGING PROJECT
MILFORD, INDIANA

THIS AGREEMENT, made and entered into by and between the Waubee Lake Association party of the first part, hereinafter called the "Owner and _____, as party of the second party, hereinafter called the "Contractor"

WITNESSTH

That for and in consideration of the mutual covenants herewith enumerated, the Owner does hereby hire and employ the Contractor to furnish all materials, equipment and labor necessary to fully construct the work designated as follows:

In Milford, Indiana,

According to the plans, standard specifications, supplemental specifications, profiles and drawings therefrom, and any supplemental or special provisions set out or referred to in the Contractor's attached proposal, and hereby agrees to pay the Contractor therefor, for the actual amount of work done and materials in place, as measured and approved by the Engineer or duly authorized representative, for the lump sum price as stated in the Contractor's attached Lump Sum Bid Proposal dated _____, which sum the Contractor agrees to accept as full payment for such construction work; and

IT IS FUTHER MUTALLY AGREED:

That the accompanying proposal together with the plans, standard and supplemental specifications and special provisions herein designated and referred to, are hereby made a part of the Contract the same as if herein fully set forth; and

That the Contract amount may be paid to the Contractor upon progress estimates of completed and approved work prepared by JFNew, in an amount not exceed Eighty Five Percent (85%) of such estimates, fifteen percent (15%) shall be withheld by the _____ for a period sixty (60) days after the completion of the work, for the purpose of securing payment of all properly prepared and certified statements of indebtedness which shall have been filed against the Contractor for labor performed and materials furnished or other services rendered in carrying forward, performing and the completing of this contract, and such estimates shall also be subject to the provisions of the Standard Specifications on file in the office of the Owner and made a part hereof; and that before any estimate is paid to the Contractor, he shall furnish receipts for all debts incurred in the prosecution of such work or satisfactory evidence and assurance that the same have been paid; or shall consent to the withholding by Owner from his final estimate of sums sufficient to cover such indebtedness, which sums may be held until such indebtedness is settled, or until conclusion of any litigation in the relation thereto filed within such period; and that no monies due on this final estimate shall be paid until the work is fully completed and accepted as provided in the Specifications.

CONTRACT 1 OF 2

IN TESTIMONY WHEREOF, the Bidder has hereunto set his hand this _____ day of _____
_____, 2005.

Contractor

By

IN TESTIMONY WHEREOF, the _____ does hereby accept
the foregoing agreement and has herewith set their hands this day _____ of _____
_____, 200__.

_____, Indiana

President of the Board, Waubee Lake Association